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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,504	03/25/2004	Taeghwan Hyeon	9907-004	8916
20575	7590	07/21/2006		
MARGER JOHNSON & MCCOLLOM, P.C. 210 SW MORRISON STREET, SUITE 400 PORTLAND, OR 97204			EXAMINER BOS, STEVEN J	
			ART UNIT 1754	PAPER NUMBER

DATE MAILED: 07/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/811,504	HYEON ET AL.
	Examiner Steven Bos	Art Unit 1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 20 April 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-22 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 20 April 2006 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                     | Paper No(s)/Mail Date. _____ .  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____ .                                  |

Art Unit: 1754

It is noted that the formulas and elements within brackets or parentheses in claims 3-6,8,11-13,18,20,21 are superfluous and should be deleted for clarity.

Claim 22 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In claim 22, it is recited that the oxidant is pyridine N-oxide and trimethylamine N-oxide however claim 12 from which it depends requires the oxidant to be oxygen, hydrogen peroxide or amine N-oxide. It appears that the amine N-oxide being pyridine N-oxide or trimethylamine N-oxide was intended.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 18, "(YPP)" is new matter. Also, "(C<sub>2</sub>-C<sub>18</sub>)" is new matter.

In claim 1, "sulfides" is new matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, "allowing one or more of thermal decomposition, reduction, oxidation, sulfidation or phosphidation of said reaction mixture" is indefinite as to what the metes and bounds of this language is since it does not require any of the reactions to take place but merely "allows" for them to occur if they do take place at all.

In claim 1, "the reacted mixture" lack(s) proper antecedent basis in the claim(s).

In claim 1, "poor solvent" is indefinite as to the metes and bounds of this phrase.

In claim 3, "said metal precursors are ... through X metals" is indefinite because it recites that the metal precursors are metals therefore the metal precursors are not precursors.

In claim 3, "the groups II through X metals" is indefinite as to which metals these are.

In claim 4, "said precursors" lack(s) proper antecedent basis in the claim(s).

In claim 5, "said metal salts" lack(s) proper antecedent basis in the claim(s).

In claim 5, "whereby these metal salts are metals ... palladium" is indefinite because it is reciting that the metal salts are metals.

In claim 5, "and anions ... alkoxides" is indefinite because alkoxides are not anions.

In claim 5, it is confusing and indefinite as to the “whereby” clause since it appears to restate what was already recited in the first part of the claim while adding further limitations.

In claim 8, “said first and second solvents” lack(s) proper antecedent basis in the claim(s).

In claim 10, “said surfactant” is indefinite as to which one this refers to the first or second.

In claim 10, “the first solution” lack(s) proper antecedent basis in the claim(s).

In claim 11, it is recited that metal sulfides are formed using a reagent selected from selenium, tellurium, selenide, telluride, etc. which does not appear to be possible and therefore renders the claim indefinite and confusing.

In claims 14,15, “said metal-surfactant complex solution” lack(s) proper antecedent basis in the claim(s).

In claim 21, “the metallic compounds” lack(s) proper antecedent basis in the claim(s).

In claim 21, “the metal alkoxides” lack(s) proper antecedent basis in the claim(s) and it appears that – the metal alkoxide compounds – was intended.

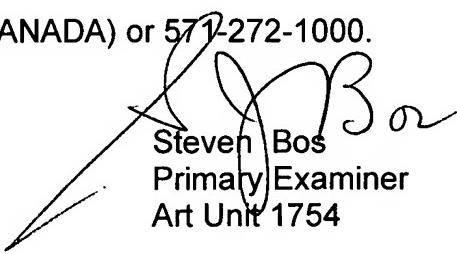
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's arguments filed April 20, 2006 have been fully considered.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Bos whose telephone number is 571-272-1350. The examiner can normally be reached on M-W,F, 8AM to 6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Steven Bos  
Primary Examiner  
Art Unit 1754

sjb